Joan Baptista Van Helmont

Reformer of science and medicine

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The life of Van Helmont in the light of his endeavour

Pessimism, scepticism, and criticism are the outstanding key-notes of all of Van Helmont's works and researches. He rejected the world into which he was born because he felt rejected by it. The historical situation of his family and its social standing provide a ready explanation for this attitude. His country was in the throes of the Spanish occupation with all its attendant cultural and doctrinal convulsions. Among these could be included the presence of the Jesuits, whom Van Helmont regarded as pseudo-scientific doctrinaires who sold rhetoric and word-splitting in place of true knowledge. They had aggravated that obscuring of truth which original sin had enforced upon mankind. Complacent human reason had ousted the only true source of knowledge of the physical world: the spiritual union of man and nature. Man could now attain knowledge only by patiently knocking at nature's door, observing, weighing, and measuring, and by experimenting in a way that was informed by imagination and vision. This search had to be crowned by personal illumination through the divine mind that should inhabit the ground of the soul, untainted by dogma. The state to be desired was that "in the kiss", the binshika of the rabbis, through which Moses was united with God. 1 By contrast Van Helmont saw about him a world of appearances, flighty and fickle, an evil world of untruth, at best a fool's paradise. It was epitomised in university protocol, in the ornate gear on the empty heads of the professors. At the completion of his studies in all fields of academic instruction, Van Helmont "retreated into himself" in sheer disgust. He chose to take with him into his retreat the works of the great Christian mystics, Thomas à Kempis and

¹ Van Helmont, *Venatio scientiarum*, 51, *Opp.* p. 28. This expression is further explained below.

Johann Tauler, as guides to that "new devotion" which bore the stamp of a homeland yet free of the foreign yoke.²

Van Helmont was born in Brussels on 12 January 1579, the year in which Belgium lost its hope of independence. Shortly before, Don Juan, son of Charles V and victor of Lepanto, had died. He was replaced by Alexander Farnese, third duke of Parma who, unlike his predecessor, succeeded in subjugating the country. In Van Helmont's words, this year, 1580, was for all of Belgium the most calamitous in its history. It was also the year in which his father, Christian Van Helmont, state counsellor of Brabant, died. Christian's widow, Marie de Stassart, was left with a number of children, Joan Baptista being the youngest. The latter's association with the Flemish landed gentry into which he had been born was made even closer by his marriage to Margarita Van Ranst in 1609. This contract made him manorial lord (toparcha) of Merode, Royenborch, Oorschot, and Pellines.³

Fatherless, and left to his own devices, the young Van Helmont soon realised what counted for most in the corridors of academic power at Louvain University. It was as if gowns and college pro-

² Studia authoris, 7, Opp. p. 16.

³ Van Helmont's autobiography is contained in Studia authoris, Opp. pp. 15-19. His juvenilia were edited for the first time by C. Broeckx, Commentaire de J. B. Van Helmont sur le premier livre du Régime d'Hippocrate: Peri diaites (Antwerp, 1849); idem, "Commentaire de J. B. Van Helmont sur un livre d'Hippocrate intitulé: peri trophes", Annales de l'Académie archéol. belg., 8 (1851), 339-433, repr. Antwerp, 1851; idem, "Le premier ouvrage (Eisagoge in artem medicam a Paracelso restitutam, 1607) de J. B. Van Helmont", Ann. Acad. archéol. belg., 10 (1853), 327-92 and 11 (1854), 119-91; repr. Antwerp, 1854. Broeckx also provided the main source material concerning the middle period of Van Helmont's life, particularly the proceedings taken against him by the Inquisition: "Notice sur le Manuscrit Causa J. B. Helmontii, déposé aux archives archiépiscopales de Malines", Ann. Acad. archéol. belg., 9 (1852), 277-327 and 341-67, repr. Antwerp, 1852; idem, "Interrogatoires du docteur J. B. Van Helmont sur le magnétisme animal", Ann. Acad. archéol. belg., 13 (1856), 306-50, repr. Antwerp, 1856; and idem, Apologie du magnétisme animal (Antwerp, 1869). For particulars on birth and family see G. des Marez, "L'état civil de J. B. Van Helmont", Annales de la Société d'archéol. de Bruxelles, 21 (1907), 107-23. Easy access to the dates and data of Van Helmont's life and the results of his scientific research is afforded by the small, but well-documented work of H. de Waele, J. B. Van Helmont, Collection nationale, series VII, no. 78 (Brussels, 1947). Chiefly bibliographical is A.J.J. Vandevelde, "Helmontiana", 5 parts in Verslagen en Mededeelingen. K. Vlaamsche Academie voor Taal-en Letterkunde, pt. 1 (1929), 453-76; pt. 2 (1929), 715-37; pt. 3 (1929), 857-79; pt. 4 (1932), 109-22; pt. 5 (1936), 339-87. See also W. Pagel, "Helmont, Johannes (Joan) Baptista Van", Dictionary of Scientific Biography, ed. C. C. Gillispie, Vol. VI (New York, 1972), pp. 253-9.

tocol in themselves were sufficient to confer scholarship and learning. Stunned by the low standards set, Van Helmont felt that their own naïveté and credulity had made the students a laughingstock. Probing his own proficiency in philosophy and the attainment (adeptus) of truth and knowledge, he saw himself inflated by verbiage and stark naked as if he had partaken of "the apple". or clad only with skill in artificial wrangling (artificiose altercari). He knew nothing, and what he thought he knew was worth nothing (nihil scirem et scirem quod nihili). Nauseated by the general subjects taught, he turned to astronomy, logic, algebra, Euclid, and Copernicanism, but learnt from these only vain "eccentricities and vet another circumgyration of the heavens". He became bored and exasperated with astronomy, which promised but little certainty and truth.4 It seemed hardly worth the time and labour which he had invested. On completion of the course he refused the title "Master of Arts", from a consciousness of his ignorance of anything substantial or true. On leaving the university he was promised a well-endowed canonry, but heeded St Bernard's warning against "living on the sins of the people". Instead he prayed to the Lord to make him worthy of his vocation as would please him. The Jesuits had then begun delivering lectures in philosophy, against the will of the king, the notables of the land, and the university, as well as an injunction issued by Clement VIII. Prominent among the Jesuits was Martin del Rio; the famous author of the Disquisitionum

⁴ The terms in which Van Helmont's early brush with astronomy is epitomised (Van Helmont, Studia authoris, 4, Opp. p. 16) have obscured the fact that he was a Copernican. What he expresses in his autobiography is his definite disbelief in the Ptolemaic system of "eccentricities". There is also a note of general scepticism aroused by the necessity of substituting one cosmic system by one or even several new systems. Van Helmont speaks of the "vain eccentricities, or things not having one and the same Center... Astronomy promised... but very many vain things" (Oriatrike, p. 12). The rendering in Aufgang (par. 5, p. 15) is preferable: "dass es mit den Mittelpunkts-Änderungen (Excentricitates) ein eyteles Wesen sey; dass sich die Himmel gantz auf eine andere Art herumb wirbeln; und dass dasjenige nicht einmal der Mühe werth sey, was ich mir einbildete mit grosser Arbeit vom Himmel erlernt zu haben".

By contrast Van Helmont makes it quite clear in his Astra necessitant (47, see the section on "Stars as light signals" in Chapter 3 of this work) that all astrology will collapse when the Copernican view has met with general recognition, noting that so far not a few, including some great authorities, had subscribed to it, although they did not say much about it. In keeping with this, and even more explicitly, he states that the earth is toto orbe mobilis and has been subject to internal changes, as for example the penetration of water caused by burrowing moles (Terra, 17, Opp. p. 54).

Joan Baptista Van Helmont

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magicarum lectured on this very subject. He had been judge to a Spanish military detachment and member of the Senate of Brabant, from which he retired to join the Society of Jesus. ⁵ Eagerly attending his courses, Van Helmont reaped but empty ideas and senseless prattle. Seneca, and more especially Epictetus, promised solace in his disappointment; he finally toyed with the idea of joining the Capuchin order as the way to true Christian stoicism. This was the point when, as he put it, the quest for eternity "smiled upon him". Frail health put paid to the project, however. Fatigued by devotional exercises aimed at perfection in Christian stoicism, Van Helmont saw himself as an empty bubble (bulla) and recognised that stoicism had made him arrogant whilst lending him an outward appearance of modesty. It was thus that stoicism became odious in his eyes. ⁶

In this extremity Van Helmont turned to herbs and medicines. God's grace should, he reasoned, have ministered most admirably to the welfare of mankind through the virtues of the herbs which he had created. Hence, Van Helmont took to browsing through Matthioli and Dioscorides. Unhappily he found that the herbal art had made no progress since the classical period. There was no more than idle discussion as to the meaning of Dioscorides' descriptions, and nothing new about the real virtue, properties, and uses of herbs. Instead much ink was spilt debating the question of their fictitious "grades" and the "qualities" which were supposed to make up their "nature" and composition by mixture (crasis). And yet Van Helmont himself knew some two hundred herbs deemed identical in quality and grade, but quite different in virtue. The converse was also true, as was particularly evident in potions for sufferers from wounds. So not the herbs - the seals of divine love – but the herbalists forfeited his respect. Where, then, were the axioms and rules of medicine by which certainty could be achieved, in place of the instability and obscurity displayed by the herbalist physicians; where was medicine taught and transmitted like any other of the arts and sciences? A professor had informed

⁵ Martin Antoine del Rio (Delrio), a Jesuit, was born 1551 at Antwerp and died in 1608 at Louvain. He was famous for his *Disquisitionum magicarum libri sex* (Louvain, 1599–1600; Mainz, 1600; Venice, 1608), rather than his biblical commentaries: see Daniel Georg Morhof, *Polyhistor literarius, philosophicus et practicus*, 4th edn., 3 vols. (Lübeck, 1747), Vol. I, lib. I, cap. 21, 94, p. 253.

⁶ Van Helmont, Studia authoris, 7, Opp. p. 16. Ibid., 8, Opp. p. 17.

⁷ Studia authoris, 11, Opp. p. 17.

him that Galen and Avicenna had left nothing undiscovered concerning the gifts, properties, applications, and fitness of herbs, from hyssop to the cedar of Lebanon. But, then, why should he who created medicine not have continued dispensing it at all periods?

Distrustful, and failing to find any certainty in herbal medicine. anxious and uncertain as to what profession he should aim at, Van Helmont next studied customs, laws, and rescripts - all man-made and dependent upon the whim of man. Again he found his time wasted. There was nothing to be learned from judging and evading the "thousand thorns of obscurity" that stood in the way of good government and justice. Meditation on the afflictions of mankind drove him, with a singleness of purpose, to the study of natural objects. He read the textbooks or Institutiones of Fernel and Fuchs, only to find the whole story of natural phenomena and actions locked up in the fictitious systems of elemental qualities. He read all of Galen twice, Hippocrates once, all of Avicenna, the Greeks, Arabs, and their contemporaries; some six hundred works altogether. From these as well as from the leading surgeons of the time, Jacques Houllier, Tagault, Guy de Chauliac, Vigo, Paulus Aegineta, he extracted copious notes. He found all these authorities wanting, and felt their deficiencies most acutely when at the age of seventeen he was called upon to give courses in surgery in the Medical College at Louvain. In his later judgment, he had then presumed to teach from books what could only be learned through observation, manual labour, long experience, and sharp discernment.⁸

He soon realised that all these books sang the same song and that his thick note-books were so much rubbish, empty of all solid knowledge and truth. Neither the study of the appearances of the herbs and drugs which he had personally collected, nor attendance at the daily rounds of a medical practitioner, would teach him more than the insufficiency, uncertainty and guess-work of healing. He found great proficiency in theoretical argument (problematice disputare) about any disease, and yet ignorance as to how to cure toothache or itch. In place of a cure there was the verdict of incurability. In short, medicine was an invention full of deceit. The Romans had lived much more happily for the five hundred years before the Greeks brought medicine to Rome, than afterwards. As often as a cure was obtained empirically or, as it were,

⁸ Studia authoris, 16–20, Opp. p. 18; Aufgang, p. 16. Tumulus pestis, Opp. II, p. 207; Aufgang, I, 28, p. 535.

experimentally, treatment based on medical theory led to failure. Good God, Van Helmont exclaimed, how long will you remain angry?

Having acquired a medical degree in 1599 at Louvain, frustrated and disgusted with the sham of academic life, Van Helmont embarked on the grand tour of Europe. He visited Switzerland and Italy between 1600 and 1602, and France and England between 1602 and 1605. He mentions a visit to London in 1604 as well as a previous occasion, possibly late in 1602, when he joined the Court at the Palace of Whitehall "in the presence of the Queen herself". Nothing he saw or learnt on his travels alleviated his frustration; he found only laziness, ignorance, and deceit. A period of practising medicine during a plague epidemic at Antwerp in 1605 made him even more conscious that useful knowledge and truth had eluded him. When offered a rich canonry he had refused to live on the sins of his fellow-men; he now declined to practise medicine, unwilling to grow rich on their misery. Nor would he accept such alluring calls as were extended to him by Ernest of Bavaria, Archbishop of Cologne, or the Emperor Rudolph II.9

What remained to him was a further retreat from any public or professional performance. He turned to a programme of research into natural philosophy, which consisted of private work to be carried out in his own laboratory, remote from university or court patronage. In a stillness undisturbed by the sermonising altercations of the scholastics he set out to "unhinge" the works of nature and to lay bare her instruments. The separation of components of complex bodies, the building-up of composites from simples, measuring and weighing – in short, chemical analysis and manipulation – were his deliberate choice, combined with meditation at the site of the still (the *athanar*), in a quest for intellectual union with the objects of his research and the divine power which had created them. Using this twofold approach he hoped to arrive at last at the truth, the invisible kernel of things. His endeavour was to make visible the invisible, which to him meant the real. ¹⁰

In turning to chemistry Van Helmont felt that he was obeying a divine call. I praise, he said, the bounteous God who called me to

⁹ De lithiasi, II, 13, Opp. II, p. 10; Astra necessitant, 48, Opp. p. 122. Promissa authoris, III, 5-7, Opp. p. 12; Promissa authoris, III, 7, Opp. p. 12. Studia authoris, 6, Opp. p. 16. Tumulus pestis, Opp. II, p. 208.

Tumulus pestis, Opp. II, p. 208; ibid., p. 208. Promissa authoris, II, 9, Opp. p. 11.

the art of fire (*pyrotechnia*), away from the "dregs" – the so-called sciences and professions; for its principles do not rest with syllogism, but are made known by nature and manifest by fire. It enables the mind to penetrate to nature's secrets and thus to ultimate truth. It admits the worker to the first roots of things through separating and exarticulating nature's deeds, through all that art can achieve in developing the virtues of the semina to maturity and perfection. ¹¹

Concentrating on chemical research did not prevent Van Helmont from following his own principles by ceaselessly curing the sick and devising and dispensing his own medicines free of charge. From his earliest youth, he averred, he had preferred knowledge to riches and abhorred lucre. He was fortunate enough to be able to dedicate himself to natural philosophy and medicine in the auspicious atmosphere of happy and affluent family life, at Vilvorde near Brussels from 1609, the year of his marriage, until the family moved to Brussels in 1616. At Vilvorde his wife possessed land, and here were born four of his daughters and his well-known son and literary executor, Franciscus Mercurius Van Helmont (1614-99). Franciscus published and introduced the first edition of Van Helmont's collected works, the Ortus medicinae of 1648, and collaborated in both the exemplary German translation of the Ortus by Christian Knorr von Rosenroth, which appeared in 1683, and in the most comprehensive edition of the Opera in 1682. 12

Van Helmont's blissful retirement into the solitude of private research lasted for some fifteen years. It was to end as a result of his outspoken criticism of his traditionalist contemporaries and in particular the Jesuits. His root-and-branch rejection of the aca-

¹¹ Pharmacopolium et dispensatorium modernum, 32, Opp. p. 441. Promissa authoris, III, 7, Opp., p. 12; Tumulus pestis, Opp. II, pp. 208–9.

Franciscus's life was marked by his many journeys from court to court, his friendship with Leibniz to whom he suggested the term "monad", his brushes with the Roman Inquisition and the Quakers, and his extensive discussions with Lady Conway against whose headaches he fought a losing battle. He continued spiritualist speculation on cosmos and man (Paradoxical Discourses, London, 1685), suggested teaching the deaf and dumb with the help of the supposedly archetypal Hebrew alphabet (1667), devised an orthopaedic stool for the deformed, and wrote cabbalistic and alchemical tracts. See Johann Christoph Adelung, Geschichte der menschlichen Narrheit, Vol. IV (Leipzig, 1787), pp. 294–323; H. Ritter, Geschichte der christlichen Philosophie, Vol. VIII (Hamburg, 1853), pp. 1–47. C. Merchant (Iltis), "The Vitalism of F. M. Van Helmont: Its Influence on Leibniz", Ambix, 26 (1979), 170–83, C. Broeckx, Le Baron Francis Mercure Van Helmont (Antwerp, 1870).

demic and medical establishment could not fail to become known and indeed to be publicised by his two first printed treatises. These were to initiate the storms of the 1620s and 1630s, which abated only a few years before his death. His work on Spa water (1624) was issued as a "Supplement" to the Spadacrene (1614) of the influential Henri de Heer (c. 1570-c. 1636). Van Helmont's criticism of traditional theories, notably those concerning the origin of water from air on the top of mountains and its use in medicine, was bound to arouse de Heer's indignation. De Heer answered Van Helmont immediately (1624) and six years later pilloried him as an empiric who had done no good in a certain case. 13 Unfortunately, the enemies Van Helmont had made among his medical colleagues found strong allies in Jesuit circles and, through them, among the ecclesiastical authorities. Already in 1621 his "magical" tract on the Magnetic Cure of Wounds had been published in Paris, without, as he asserted, his knowledge and with malicious intent. Religious prosecution followed, lasting for some twenty years, at the end of which time (1642) formal proceedings against him were officially discontinued, although his long house-arrest had been lifted six vears before.

An adverse destiny involved Van Helmont in a controversy that agitated and divided the minds of religious natural philosophers and physicians in the early decades of the seventeenth century. The protagonists were Rudolphus Goclenius (1572–1628), Protestant Professor of Philosophy at Marburg, and Jean Roberti (1569–1651), a Jesuit casuist and Professor at Douai, Trier, Würzburg, and Mainz. Goclenius was a firm believer in natural magic as operating through sympathy and antipathy between natural objects; Roberti, a preacher warning and arguing against any form of magic as the deceitful work of the devil. A literary warfare from 1617 to 1625 produced seven attacks and counter-attacks between Goclenius

¹³ Henri de Heer, Spadacrene, hoc est Fons Spadanus; eius singularia, bibendi modus, medicamenta bibentibus necessaria (Liège, 1614; 2nd edn., Leipzig, 1645). Idem, Deplementum supplementi de Spadanis fontibus (Louvain, 1624), replying to Van Helmont's Supplementum de Spadanis fontibus (Liège, 1624). De Heer, Observationes medicae oppido rarae in Spa et Leodii animadversae (Liège, 1630; 2nd edn., Leipzig, 1645), Observ. XXV, p. 287: "Euphorbium...ab empirico Helmontio Bruxellensi propinatum...extimam stomachi tunicam erosit" (and likely to have caused fatal perforation of a chronic gastric ulcer). Idem, Spadacrene ultimis curis polita hoc est Fons Spadanus accuratissime descriptus (Liège, 1635; 2nd edn., Leyden, 1645). On de Heer see Hirsch (ed.), Biog. Lex. hervorr. Ärzte, iii, 110, by Van den Corput. A.J.J. Vandevelde, "Helmontiana", pt. 2 (1929), pp. 722-4.

and Roberti. The first tract of the former had appeared in 1608.¹⁴ When Van Helmont became party to the controversy in 1621, Roberti immediately contested the "pernicious disputation" of the "pyrotechnic physician of Brussels". Roberti had acquired Van Helmont's manuscript and probably procured its publication.¹⁵

The issue at stake was the pseudo-Paracelsian idea of a "weaponsalve". 16 This was to be applied not to the wound, but to the weapon which inflicted it. It was supposed to act by sympathy whatever the distance between the patient and the "doctor" treating the weapon. Van Helmont took the attitude of the unprejudiced observer who collects all available case-reports, and wanted to give the method every chance to be proven. He found fault with both contenders, criticising Goclenius's factual evidence and Roberti's appraisal of the phenomenon as a whole. The former had omitted the presence of inspissated blood on the weapon, which in Van Helmont's opinion was essential for the method to be effective. Moreover, Goclenius's contention that the moss which was an ingredient of the salve must come from the skull of a hanged criminal was not true; any skull would be suitable. Roberti. on the other hand, had looked for his arguments in a field that was most unproductive for the natural philosopher, namely theology in general and action of the devil in particular. He had treated a

¹⁴ In Sylvester Rattray's collection, Theatrum sympatheticum auctum...de pulvere sympathetico...de unguento vero armario (Nürnberg, 1662), easy access is given to: R. Goclenius, Tractatus de magnetica vulnerum curatione of 1608, on p. 177; J. Roberti, Tractatus novi de magnetica vulnerum curatione autore D. Rod. Goclenio...brevis anatome, on p. 226; R. Goclenius, Synarthrosis magnetica of 1617 on p. 237; and J. Roberti, Goclenius heautontimorumenos (1618) on p. 309, Van Helmont's tract following thereafter on p. 457. See de Waele, J. B. Van Helmont, pp. 27–8 for further titles.

¹⁵ Van Helmont's manuscript was submitted in 1618 by a publisher to P. Stevart at Liège for an *imprimatur*. This was first granted, but revoked later. On request Van Helmont sent a manuscript copy to Remacle Roberti, the brother of Jean. The latter is not unlikely to have published it without the author's knowledge and consent. For details of the ensuing prosecution and the medical opinions submitted to the courts, see Broeckx, "Notice sur le Manuscrit Causa J. B. Helmontii", pp. 277–327, 341–67; and idem, "Interrogatoires du...Van Helmont", pp. 306–50.

For the ingredients of the weapon-salve see Knorr von Rosenroth in Aufgang, pp. 1008-9, "Anmerckung" with reference to the original source, the pseudo-Paracelsian Archidoxis magica, ed. Sudhoff, xiv, 448.

problem of natural science as a quaestio juris rather than a quaestio facti as it should be. 17

In Van Helmont's view the reported effects were amenable to explanation in naturalistic terms. They were indeed attributable to "magnetic" forces, to attraction, that is, of particles; in the present instance, particles of the ointment mixed with blood sticking to the weapon were attracted to the wound. The miraculous power of blood, its "magic", was similarly open to our understanding. This power included the preventing and healing effects of the blood of convalescents, which could retard the spread of the poison of a rabid dog in the body of the person bitten; it could grant a "supersedeas [a writ staying proceedings] to prorogue the time of the Venom's energy, the poyson being charmed into inactivity". Similarly, "fatally destructive" shingles was safely and expeditiously cured by anointing the patient with the blood of someone who had already recovered from this condition. Conversely disease can be transmitted - "transplanted" - to an animal by the blood of the patient, who may thereby be rid of his own disease. 18 Although an aspect of the attraction of matter by matter, and achieved by matter, these effects are at the same time spiritual; they are product and expression of that sense and sympathy which dwell in each object of the created world. Indeed, spirit is the primary driving force to which all material change is subordinated. This, however, does not imply a dualistic view in which spirit is imposed on matter; the spiritual and the material are rather seen as the two convertible faces of the same coin, the individual unit, in which they are inseparably interwoven. The spirit is not additional but intrinsic to the body of the object; "the magnet is endowed with various senses and also with imagination, a certain Naturall phansy". In other words the spiritual impulse or "life" is inherent

¹⁷ Machination of the devil was commonly adduced as the cause of what looked unnatural. Its deep roots are best revealed in del Rio's *Disquisitionum magicarum*, I, 3, quaest. 3, pp. 30 et seq., on the miraculous effects of imagination; ibid., II, quaest. 8, pp. 127 et seq. on how the devil works miracles and transmutations and how the magi do so through him. "Black magic" operating by virtue of the devil or by incantation (words), or amulets, which are also of the devil is invoked by Thomas Fienus (1567–1631) who denied the power of imagination in favour of humoralist theories (*De viribus imaginationis*, Louvain, 1608, p. 83). Del Rio as well as Fienus taught at Louvain when Van Helmont was a student there.

¹⁸ Van Helmont, De magnetica vulnerum curatione, 49-50, Opp. p. 712; Three Treatises, trans. Walter Charleton (London, 1650), p. 12; Oriatrike, p. 763. De magnetica vulnerum curatione, 20, Opp. p. 707.

in all things, not only in those which appear to be animated. Like yearns to join like, and the sympathy that pervades the cosmos accounts for effects that are deemed "paradoxical" and hence are attributed to the devil. These effects belong, however, to natural magic, in which the agent is not the devil as "fiddler", but rather the world-soul or "mundane spirit", the "common Intelligencer" in which sympathy between all things is invested. No devilish trick or force can come between magic and nature, not even when it is practised by the witch who "kills a horse, in a stable removed at good distance, by a certain naturall power derived from her spirit". ¹⁹

Magnetic effects, then, may be wrought in dead-looking metal or through the "will of nature" intrinsic in flesh and blood; they may act by touch as in the shock dealt by the electric fish, or at long distance as by the destructive stare of the basilisk. In all instances they are perfectly legitimate and natural, nature being the magician by virtue of universal sense and sympathy, rather than the devil who may seduce, corrupt, and deceive, but who is incapable of bringing about physical change. Reports of phenomena of natural magic, however hair-raising and unbelievable at first, must at least be given the benefit of investigation. Van Helmont was not alone in giving credit to such accounts; others such as Harvey and Boyle set great store by unorthodox "Helmontian" cures, leaving aside the multitude of contemporary Paracelsians and the "Chemical Philosophers".

Van Helmont presented his doctrine as "Christian philosophy", opposed to the delusions and otiose dreams of the heathens. This not only implied the aim of demolishing the whole traditional syllabus of ancient natural philosophy and medicine but also contained an insinuation of heresy against the established scholars, theologians, and physicians whose life and work stood and fell with this very syllabus. This was unfortunate enough. Even more fatal to Van Helmont's security were the open criticisms and ridicule which he levelled against the Jesuits. On the matter of the moss needed for the weapon-salve, Van Helmont wrote point-

De magnetica vulnerum curatione, 142-4, Opp. p. 727; Three Treatises, trans. Charleton, pp. 76-7. De magnetica vulnerum curatione, 151, Opp. p. 728; Three Treatises, trans. Charleton, p. 80. De magnetica vulnerum curatione, 152-4, Opp. pp. 728-9. De magnetica vulnerum curatione, 108 et seq., Opp. p. 723, and 87, p. 720; Three Treatises, trans. Charleton, pp. 62, 56.

edly: "For, if a Jesuite, put to death by strangulation, or any other kinde of martyrdom, be left sub die, in an obedient position to receive the influence of the stars; yet his head will yeeld the same crop of Moss, equivalent in use, and equally ripe, with the head of a Thief". Why, the adversaries of the weapon-salve rhetorically demanded, had the world had to wait for Paracelsus, a "lewd, dissolute and ignorant fellow", to invent this remedy? Van Helmont pilloried this line of argument as insolence not only to the dead, but also to God:

As if he ought not to have infused the knowledge of so divine a secret into Paracelsus, but some other person (some Jesuite perhaps) nor to have manifested so great a consonancy and harmony of Nature, in the days of Paracelsus, but much earlier, in the infancy of the world. But I beseech you, why came Ignatius Loyola so late, and in the evening of the world, to be the founder and establisher of a Society, so useful and profitable to the whole world? Why did he not spring up, and appear many ages sooner? Alas, wretched man, whither doest thou hurry thy self by presumption?²⁰

Ecclesiastical prosecution soon followed. In 1623 members of the Louvain Medical Faculty denounced Van Helmont's tract as a "monstrous pamphlet". In 1625 the General Inquisition of Spain declared twenty-seven of its propositions as suspect of heresy, as impudently arrogant, and as affiliated to Lutheran and Calvinist doctrine. A year later the tract was impounded by order of Sebastian Huerta at Madrid. In 1627 Van Helmont affirmed his innocence and submitted to ecclesiastical discipline before the curia of Malines, which referred the matter to the Louvain Theological Faculty. In 1630 the defendant admitted his guilt and revoked his "scandalous pronouncements", to be duly convicted by the Faculty for adhering to the monstrous superstitions of the school of Paracelsus, that is of the devil himself, for "perverting nature by ascribing to it all magic and diabolic art and for having spread more than Cimmerian darkness all over the world by his chemical philosophy [pyrotechnice philosophando]".21

In March 1634 Van Helmont spent four days in the archiepiscopal prison, but was transferred, against high securities, to the

²⁰ De magnetica vulnerum curatione, 174, Opp. p. 732; ibid., 41, Opp. p. 711; ibid., 52, Opp. p. 713; Three Treatises, trans. Charleton, pp. 92, 24, 30-1 (par. 51).

²¹ Opinion of the Louvain Theological and Medical Faculties 1630–4, given in Broeckx, "Notice sur le Manuscrit Causa J.B. Helmontii", pp. 30–1. Van Helmont was here bracketed with the painter Otho Venius (Van Veen, 1556–1634), the teacher of Rubens.

Minorite Convent at Brussels, and after several interrogations released on house-arrest. As we have seen, formal proceedings continued until 1642, when he also obtained an ecclesiastical imprimatur for his treatise on fevers. Two years after his death, in 1646, his widow secured his official rehabilitation by the archbishop of Malines. 22 Prosecution had disrupted and embittered Van Helmont's life in many respects. Two of his children died while separated from him owing to the restrictions imposed upon his movements. For some twenty years, between 1624 and 1642, he published nothing. He suffered much anxiety, which he felt had fallen on him through no fault of his own and which at one time brought about one of his introspective visions. And yet he continued his research and prepared the bulk of his treatises which have come to us in the Works (Ortus medicinae, The Rise of Medicine). He still took part in contemporary discussions in which his opinion was sought by such authorities as Marin Mersenne.²³ The treatise which was the cause of all the misery, the erstwhile "monstrous pamphlet" on the magnetic cure of wounds, was finally reprinted in all editions of the Works between 1648 and 1707, again perhaps not with the will of the author, but at any rate under the aegis initially of the editor, his son Franciscus Mercurius. In 1661 Robert Boyle expressed his admiration for Van Helmont, with the pointed exception of just this treatise.

Our knowledge of Van Helmont, his life, his natural philosophy, and his medicine, derives from the *Ortus*, published four years after his death, and from the appended *Opuscula* which had first appeared in 1644. ²⁴ It might be assumed that his son's task would have been to collect, arrange, and integrate into a whole a number of scattered and discontinuous manuscripts. This was not so. We know from the best possible source, namely Van Helmont himself, that the *Ortus* existed as such a long time before he died.

²² Broeckx, ibid. Idem, "Interrogatoires du... Van Helmont". De Waele, J. B. Van Helmont, pp. 33-40. For some minor points see P. Nève de Mévergnies, Jean-Baptiste Van Helmont, Philosophe par le Feu (Paris, 1935), pp. 122-42.

²³ Van Helmont, Imago mentis, 13, Opp. p. 256; Aufgang, pp. 871-2. P. Tannery and C. de Waard (eds.), Correspondence du Père Marin Mersenne, Vols. I-III (Paris, 1932-46): 3 letters to Mersenne in Vol. II, and 11 in Vol. III (1630-1).

²⁴ Van Helmont, Ortus medicinae, id est initia physicae inaudita. Progressus medicinae novus, in morborum ultionem, ad vitam longam (Amsterdam, 1648). Idem, Opuscula medica inaudita: I de lithiasi, II de febribus, III de humoribus Galeni, IV de peste, 2nd edn. with Ortus Medicinae, 1648; 1st edn., Cologne, 1644.